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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/642,276	08/18/2003	Ryosuke Kogure	60303.34	2466

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EXAMINER	
SHEEHAN, JOHN P	

ART UNIT	PAPER NUMBER
1742	

DATE MAILED: 08/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/642,276	KOGURE ET AL.	
	Examiner	Art Unit	
	John P. Sheehan	1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 June 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 5-12* is/are rejected.

7)☒ Claim(s) *2-4* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112, 1st Paragraph

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1 and 5 to 12 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the method disclosed for example, in paragraphs 0010 and 0039 of the specification, does not reasonably provide enablement for the claimed process step of "thermally treating the rapidly solidified alloy to produce a compound phase having an $NaZn_{13}$-type crystal structure in at least about 70 vol% of the rapidly solidified alloy" as recited in the last 3 lines of claim 1 and in claim 5. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with these claims.

I. The last 3 lines of claim 1 encompass any and all methods of thermally treating the rapidly solidified alloy so as to provide a phase having the $NaZn_{13}$ crystal structure in at least 70 vol% of the rapidly solidified alloy. For example, the last 3 lines of claim 1 encompass any combination of heat treatments and/or working steps including any combination of heat treatment times and/or temperatures and/or reduction rates. However, the specification discloses only a

single method of treating the solidified alloy so as to provide the recited crystal structure, for example, see paragraphs 0010 and 0039 of applicants' specification.

Claim Rejections - 35 USC § 112, 2nd Paragraph

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

I. In view of the claim language, "solidifying the melt immediately produces the compound phase having the NaZn13-type crystal structure" dependent claim 5 encompasses the embodiment wherein the $NaZn_{13}$ crystal structure is formed directly during the rapid cooling and solidification step without any heat treatment. On the other hand, independent claim 1, from which claim 5 depends, recites that the $NaZn_{13}$ crystal structure is produced during the thermal treatment of the rapidly solidified alloy. Thus, while independent claim 1 produces the recited crystal structure by way of a heat treatment, dependent claim 5 forms the recited structure directly by simply casting. Accordingly, as presently drafted claim 5 is not consistent with claim 1. Thus, it is not clear what it is that applicants' are attempting to claim in claim 5. This is particularly true in view of the applicants" disclosure that;

> "nobody has ever reported that the $LaFe_{13}$-based magnetic alloy could be produced successfully by a rapid cooling process" (applicants' specification, paragraph 0044, the last sentence).

Status of the Prior Art Rejections

3. The rejection of claims 1 and 6 to 12 under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over the admitted known prior art (AAPA) as discussed in paragraphs 0002 and 0003 of applicants' specification has been overcome by:

I. The amendment to the claims adding the limitation "by a melt-quenching process; and

II. Applicants' argument (applicants' response, page 7) that;

> Claim 1 has been amended to recite the step of "rapidly cooling and solidifying the melt of the alloy material by a melt-quenching process to obtain a rapidly solidified alloy" (emphasis added). As discussed above, support for this step is found, for example, in paragraphs (0037) and (0044) in Applicants' originally filed specification. As the Examiner is well aware, melt-quenching is different from direct casting. Thus, AAPA clearly fails to teach or suggest the step of "rapidly cooling and solidifying the melt of the alloy material by a melt-quenching process to obtain a rapidly solidified alloy," as recited in Applicants' claim 1.

Allowable Subject Matter

4. Claims 2 to 4 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. The following is a statement of reasons for the indication of allowable subject matter: The primary reason for the indication that claims 2 to 4 are directed to allowable subject matter is that the closest known prior art, that is, the admitted known prior art in paragraphs 0002 and 0003 in the instant specification teaches that the magnetic alloy is annealed at a temperature of about 1050^0C for approximately 168 hours whereas in instant claims 2 to 4 the magnetic alloy is annealed at a temperature of about 400^0C to 1200^0C for about 1 second to about 100 hours. The prior art does not teach or suggest reducing the heat treatment time form 168 hours as taught by the admitted known prior art to from 1 second to 100 hours.

Response to Arguments

6. Applicant's arguments filed June 30, 2006 have been fully considered but they are not persuasive.

7. Regarding the rejection of claims 1 and 5 to 12 under 35 U.S.C. § 112, first paragraph, applicants state that the newly added claim language, "thermally treating the rapidly solidified alloy to produce a compound phase" overcomes the rejection. The Examiner does not agree. As presently amended claim 1, the last 3 lines, still encompass any combination of heat treatments and/or working steps including any combination of times and/or temperatures and/or reduction rates. However, the

specification discloses only a single method of heat treating the solidified alloy so as to provide the recited crystal structure, that is, thermally treating the rapidly solidified alloy at temperature of about 400 ^{0}C to about 1,200 ^{0}C for about 1 second to about 100 hours.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

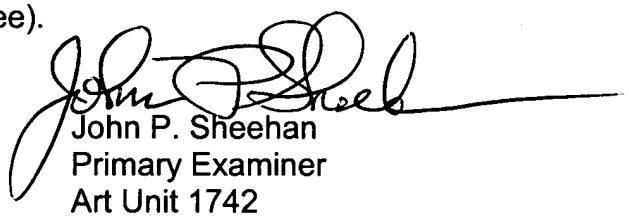
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John P. Sheehan whose telephone number is (571)

272-1249. The examiner can normally be reached on T-F (6:45-4:30) Second Monday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



John P. Sheehan
Primary Examiner
Art Unit 1742

jps